

## ABSTRACT

A prosthetic aortic valve is designed to be implanted in the natural aortic annulus and to extend into the ascending aorta to a point short of the right and left coronary arteries. Blood leakage around the valve is prevented by tension in one or more circumferential cords drawing annular tissue into sealing contact with an external sealing ring on the valve body. The security of the valve's attachment to a patient is assured with a plurality of interrupted sutures between a semirigid flange on the valve outer surface and the patient's aortic commissures and/or the patient's ascending aortic wall. The sutures are preferably attached to posts or cleats on the semirigid sewing flange, the flange being spaced apart from the valve inlet by the sealing ring.